PUBLIC

Cloud Security Dashboard Configuration

with Sample Data +

with SAP Analytics Cloud & Cloud Application Lifecycle Management

How To Guide

Table of contents

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

List of Figures

List of Tables

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

Changelog		
Time	**Version**	**Comment**
16.01.2024	v1.0	Document created
26.01.2024	v2.0	Document enhanced with Cloud ALM API Connectivity setup

1. Abstract

This document provides information on the consumption of the cloud security recommendations via the Cloud ALM API. It also explains how a data model from SAP Analytics Cloud (aka SAC) can be used to visualize the compliance status of the provided security data.

Additionally, sample data is provided as part of the package to show how a data model could be built up. Data from an XLSX file enriches the data delivered by the API.

Note: Section 5 and Section 6 explain the sample files and are not required to setup the connectivity between SAP and Cloud ALM.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

2. Audience

- Customers who want to use the Cloud ALM API to retrieve cloud security relevant data in its raw format.
- Customers who want to use the Cloud ALM API in combination with SAP Analytics Cloud to visualize the results by using the SAC Cloud Security Dashboard.
- Partners who want to build their own dashboard solution.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

3. Resources

Security Recommendations:

- Cloud Security Recommendations Overview
- BTP Security Recommendations

Cloud ALM API:

- Cloud ALM Analytics API
- API Guide for SAP Cloud ALM
- Configuration Stores of Cloud ALM

SAP Analytics Cloud:

- SAP Analytics Cloud

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

4. Data Model

SAP provides a Cloud Security SAC Story as template within SAC that customers can use as a basic dashboard or as a starting point to develop more comprehensive dashboards. This template is using the following data structure and combines two data sources:

- **Cloud ALM API** which will be queried as configured in SAC's data import scheduler.
- **Static Extension file** which will extend the information from the API based on information from the security recommendation help pages.

  Note: this file must be periodically updated within SAC to get updates, e.g., when new cloud systems and services are coming into scope. See Section 9.a)

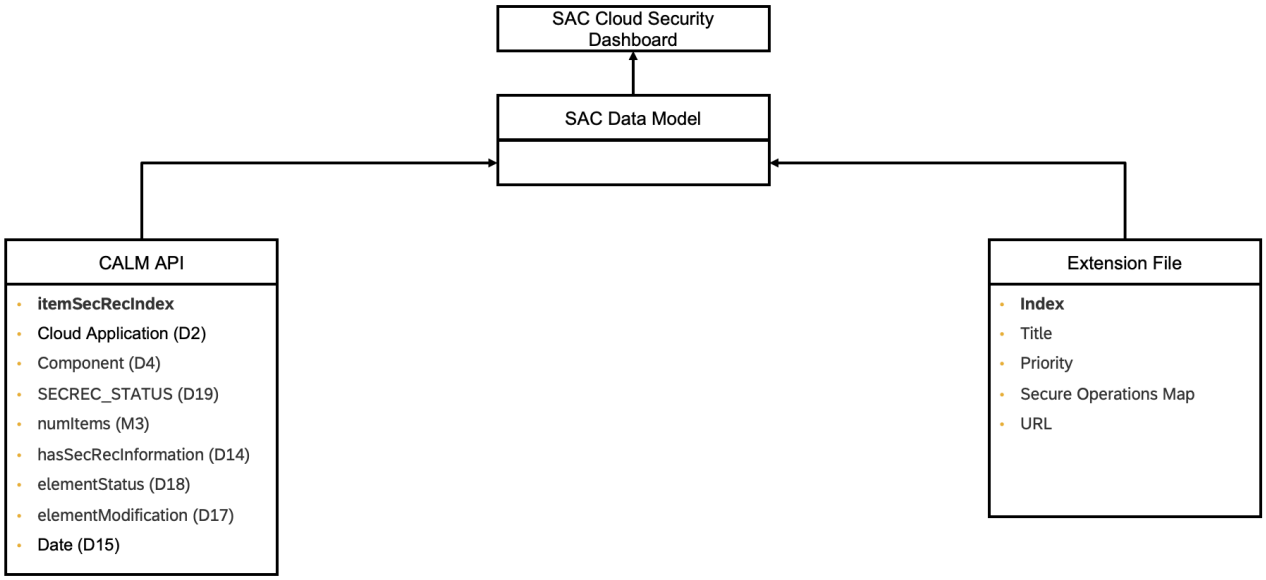


Figure 1: SAC Cloud Security Data Model

a. SAC Naming Convention

Object Name in SAC	Object Type	Description
SAP_CC_Security_Configuration	Story	SAC Story which is showing the Cloud Security Recommendations
SAP_CC_Security_Configuration	Model	SAC Data Model for the Cloud Security Recommendations delivered by the Cloud ALM API and the static extension file
SAP_CC_SecConfig_CALMAPI	Dimension Table	Reflects the static extension file within the SAC Data Model. Note: this table must be maintained once new cloud services are getting onboarded. See Section 9.a)

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

b. Data Model in SAC

- The imported data from the Cloud ALM API is stored in the ID object of the SAC Data Model

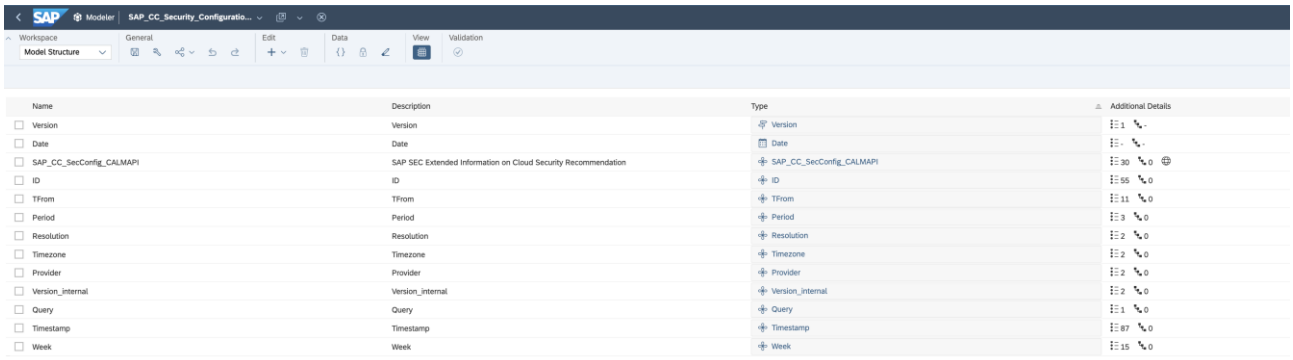


Figure 2: Data Model Structure in SAC

- By clicking on the ID object, the Cloud ALM API data can be observed.

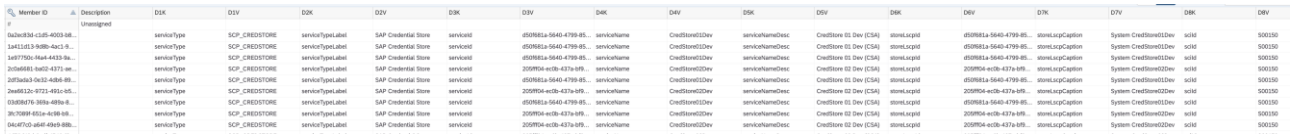
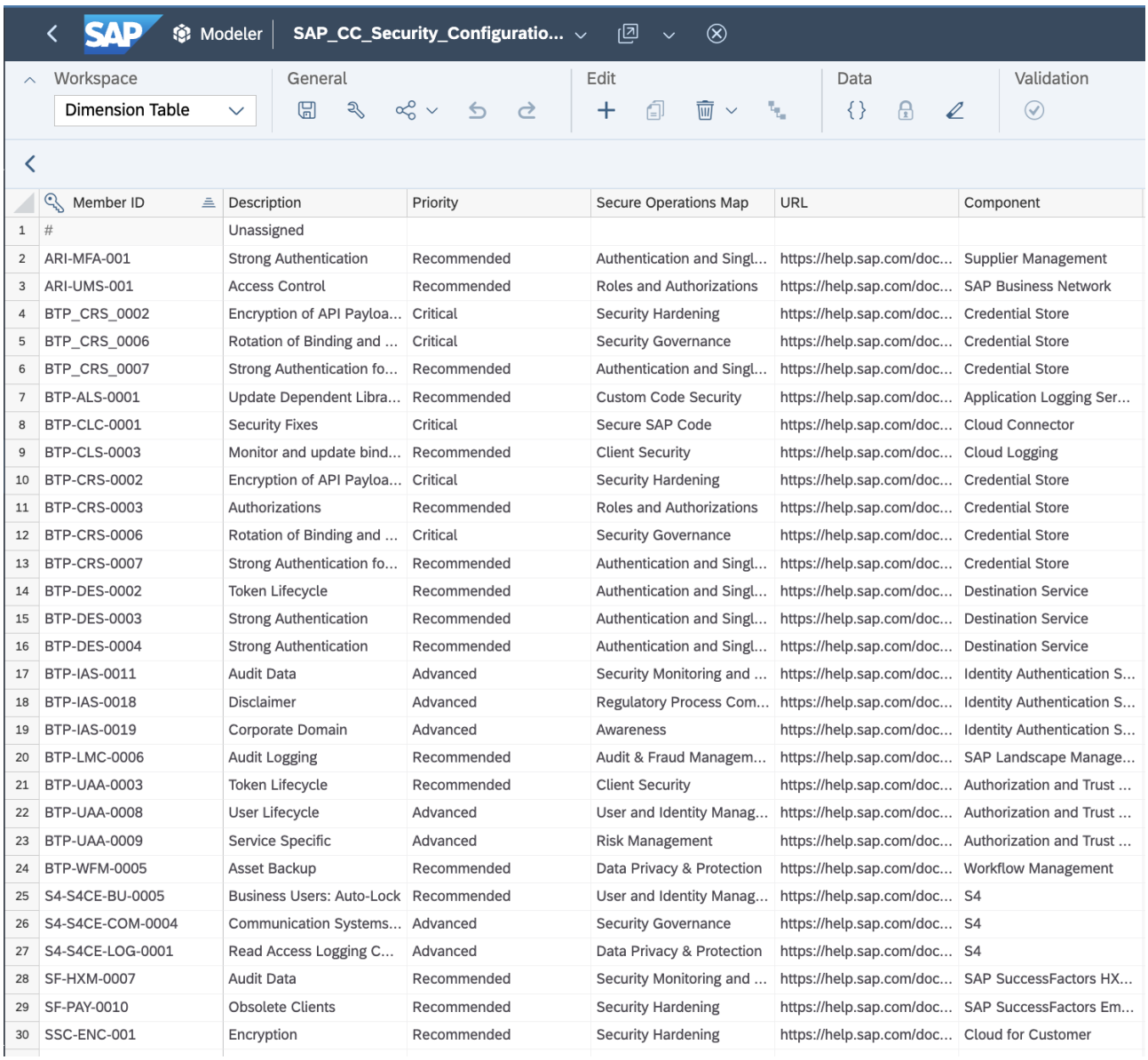


Figure 3: Data Model Example of the ID Object

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.



	Member ID	Description	Priority	Secure Operations Map	URL	Component
1	#	Unassigned				
2	ARI-MFA-001	Strong Authentication	Recommended	Authentication and Singl...	https://help.sap.com/doc...	Supplier Management
3	ARI-UMS-001	Access Control	Recommended	Roles and Authorizations	https://help.sap.com/doc...	SAP Business Network
4	BTP_CRS_0002	Encryption of API Payloa...	Critical	Security Hardening	https://help.sap.com/doc...	Credential Store
5	BTP_CRS_0006	Rotation of Binding and ...	Critical	Security Governance	https://help.sap.com/doc...	Credential Store
6	BTP_CRS_0007	Strong Authentication fo...	Recommended	Authentication and Singl...	https://help.sap.com/doc...	Credential Store
7	BTP-ALS-0001	Update Dependent Libra...	Recommended	Custom Code Security	https://help.sap.com/doc...	Application Logging Ser...
8	BTP-CLC-0001	Security Fixes	Critical	Secure SAP Code	https://help.sap.com/doc...	Cloud Connector
9	BTP-CLS-0003	Monitor and update bind...	Recommended	Client Security	https://help.sap.com/doc...	Cloud Logging
10	BTP-CRS-0002	Encryption of API Payloa...	Critical	Security Hardening	https://help.sap.com/doc...	Credential Store
11	BTP-CRS-0003	Authorizations	Recommended	Roles and Authorizations	https://help.sap.com/doc...	Credential Store
12	BTP-CRS-0006	Rotation of Binding and ...	Critical	Security Governance	https://help.sap.com/doc...	Credential Store
13	BTP-CRS-0007	Strong Authentication fo...	Recommended	Authentication and Singl...	https://help.sap.com/doc...	Credential Store
14	BTP-DES-0002	Token Lifecycle	Recommended	Authentication and Singl...	https://help.sap.com/doc...	Destination Service
15	BTP-DES-0003	Strong Authentication	Recommended	Authentication and Singl...	https://help.sap.com/doc...	Destination Service
16	BTP-DES-0004	Strong Authentication	Recommended	Authentication and Singl...	https://help.sap.com/doc...	Destination Service
17	BTP-IAS-0011	Audit Data	Advanced	Security Monitoring and ...	https://help.sap.com/doc...	Identity Authentication S...
18	BTP-IAS-0018	Disclaimer	Advanced	Regulatory Process Com...	https://help.sap.com/doc...	Identity Authentication S...
19	BTP-IAS-0019	Corporate Domain	Advanced	Awareness	https://help.sap.com/doc...	Identity Authentication S...
20	BTP-LMC-0006	Audit Logging	Recommended	Audit & Fraud Managem...	https://help.sap.com/doc...	SAP Landscape Manage...
21	BTP-UAA-0003	Token Lifecycle	Recommended	Client Security	https://help.sap.com/doc...	Authorization and Trust ...
22	BTP-UAA-0008	User Lifecycle	Advanced	User and Identity Manag...	https://help.sap.com/doc...	Authorization and Trust ...
23	BTP-UAA-0009	Service Specific	Advanced	Risk Management	https://help.sap.com/doc...	Authorization and Trust ...
24	BTP-WFM-0005	Asset Backup	Recommended	Data Privacy & Protection	https://help.sap.com/doc...	Workflow Management
25	S4-S4CE-BU-0005	Business Users: Auto-Lock	Recommended	User and Identity Manag...	https://help.sap.com/doc...	S4
26	S4-S4CE-COM-0004	Communication Systems...	Advanced	Security Governance	https://help.sap.com/doc...	S4
27	S4-S4CE-LOG-0001	Read Access Logging C...	Advanced	Data Privacy & Protection	https://help.sap.com/doc...	S4
28	SF-HXM-0007	Audit Data	Recommended	Security Monitoring and ...	https://help.sap.com/doc...	SAP SuccessFactors HX...
29	SF-PAY-0010	Obsolete Clients	Recommended	Security Hardening	https://help.sap.com/doc...	SAP SuccessFactors Em...
30	SSC-ENC-001	Encryption	Recommended	Security Hardening	https://help.sap.com/doc...	Cloud for Customer

Figure 4: Data Model Structure - Example of Dimension Table

Note: details to the Cloud ALM API can be found here:

- Cloud ALM Analytics API on API Hub
- Cloud ALM Analytics API documentation

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

5. Sample Data

The provided sample data is reflecting the data model described in Section 4. It is already part of the package.

- **Cloud Security Recommendations – Static Content.xlsx**
  This file provides additional data required for analysis but is not part of the content delivered by the Cloud ALM API. It provides for example the information of the SAP Secure Operation Map and the priority status.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

6. Data Description

The Cloud ALM provides the data via the Cloud ALM Analytics API. The data is delivered as

- Dimensions with column names like D1K (Key) and D1V (Value)
- Measures like M1, M2, etc., with column name like M1K (Key) and M1V (Value)
- Additional attributes like timestamp

The following dimensions are relevant for the security dashboard:

a. Data Delivered by Cloud ALM API

Attribute	CALM API Attribute	Description	Example
itemSecRecIndex	D20	Security Recommendation ID as documented on the security recommendation help pages	BTP-CRS-0002
Cloud Application	D2	Main cloud application	BTP
Component	D4	Potential Subcomponent of the main cloud application	Credential Store
SECREC_STATUS	D19	Compliance or Non-Compliance	COMPLIANT
numItems	M3	Counter as Measure Attribute	1
hasSecRecInformation	D14	Indicator if a recommendation is delivered. Should always be TRUE	TRUE
elementStatus	D18	Status of the reported element	Current
elementModification	D17	Indicator if the item was reported the first time or just updated	Initial
Date	D15	Date when the item was reported.	11/20/2023

Table 1: CALM API Data Structure

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

b. Cloud Security Recommendations – Static Content.xlsx

Column	Description	Example
itemSecRecIndex	Security Recommendation ID as documented on the security recommendation help pages	BTP-CRS-0002
Title_Topic	Topic description as described on the security recommendation help pages	Encryption of API Payloads
Risk Level	Risk level derived from the priority	Critical
Priority	Priority Level documented on the security recommendation help page	Critical
Secure Operations Map	Area of SAP's Secure Operations Map	Security Hardening
URL	URL to the SAP help page with security recommendations	Link

Table 2: Static Content File Structure

This data is derived from the Security Recommendation help pages of the LoBs. In case you add new applications or services, an update might be required.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

7. Cloud ALM API Connectivity

Cloud ALM provides its data via an OData Service from the Cloud ALM Analytics API. This section will describe how:

- the API can be tested via the Business Acceleration Hub (api.sap.com)
- and how the API will be called from SAP Analytics Cloud

a. API Connectivity Test with SAP Business Accelerator Hub

Note: Before you start the connection between SAC and Cloud ALM, it is recommended to test the Cloud ALM connectivity on the SAP Business Accelerator Hub. With this connection, you can validate if the required connection data (URL and credentials) is valid and can also be used later on for the SAC connectivity.

- Use the “Try Out” section of the Cloud ALM analytics service.
- And create a new test environment.

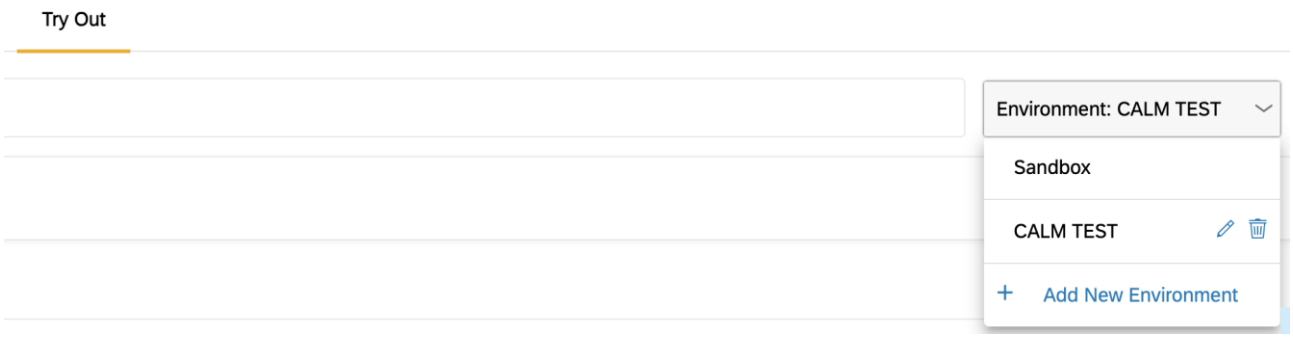


Figure 5: API Hub Try Out Section

- Enter the Customer’s SAP Cloud ALM Subaccount data into the connectivity form of the SAP Business Accelerator Hub.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

Edit Configuration

Configure an environment for your licensed product to test APIs using your data.

API Name: SAP Cloud ALM Analytics

Basic Information

Display Name:*

CALM TEST

Starting URL:*

https://{tenant}.eu10.alm.cloud.sap/api/calm-analytics/v1

Tenant *

dev

Resulting URL

Resulting URL:*

https://dev.eu10.alm.cloud.sap/api/calm-analytics/v1

Authentication

Authentication Type*

OAuth 2.0 Application Flow

Client ID *

****

Client Secret *

••••••••

Token URL*

https://[redacted]ledata.authentication.eu10.hana.ondemand.com/oauth/token

Identityzone *

calm-dev-eu10-[redacted]

Region *

eu10

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

For the input form the following data is required:

Configuration Item	Value	Description
Display Name	Free Text	Name of the configuration
Starting URL	URL of the SAP Cloud ALM Analytics API based on the customer's individual tenant.	URL of the analytics API will be automatically generated via the tenant ID.
Tenant	<Custom Value>	
Authentication Type	OAuth 2.0 Application Flow	Authentication method based on client ID / secret credential exchange with Oauth2
Client ID	<Custom Value> retrieved from SAP Cloud ALM Subaccount with SAP BTP Cockpit	
Secret	<Custom Value> retrieved from SAP Cloud ALM Subaccount with SAP BTP Cockpit	
Token URL	<identity zone> .authentication.<region>.com/oauth/token	
Identity Zone	<SAP Cloud ALM Subaccount organization name (Org Name)>	
Region	<SAP BTP Region (**https://help.sap.com/docs/btp/sap-business-technology-platform/regions-and-api-endpoints-available-for-cloud-foundry-environment?version=Cloud**)>	

Table 3: Cloud ALM Connection Data

- Press the RUN Button. Results will be shown in the part of the Response Body with the HTTP OK Code 200.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

200

Response Body | Response Headers


```
{
  "@context": "$metadata#DataSet",
  "@metadataEtag": "W/\"18a6694ff6f1ccc9cb6d7e00f1c7a024c1bbc29ed1ad612afdb40f8cad327d48\"",
  "@count": 56,
  "value": [
    {
      "ID": "5d3df7b5-3e4f-4aed-b9e9-d1066c90130d",
      "tfrom": "20240116000000",
      "firstWeekDay": "MO",
      "period": "L7D",
      "resolution": "D",
      "timeZone": "+00:00",
      "provider": "DEMO_TASKS",
      "version": "v2",
      "query": "Project=CRM",
      "timestamp": "20240122000000",
      "date": "20240122",
```


© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

b. SAP Analytics Cloud Connection to Cloud ALM

To setup the connection between SAC and Cloud ALM, the same data is required, as described in Section 7(a), Table 3: Cloud ALM Connection Data

i. Retrieve Client ID / Secret from Cloud ALM tenant.

- Open your BTP cockpit and create a new instance of the service “SAP Cloud ALM API” within the Cloud Foundry Space. This service instance will hold the key and the needed authorizations.

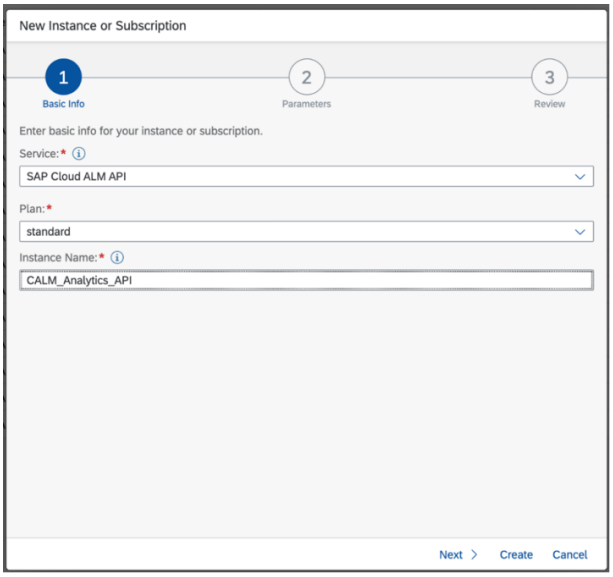
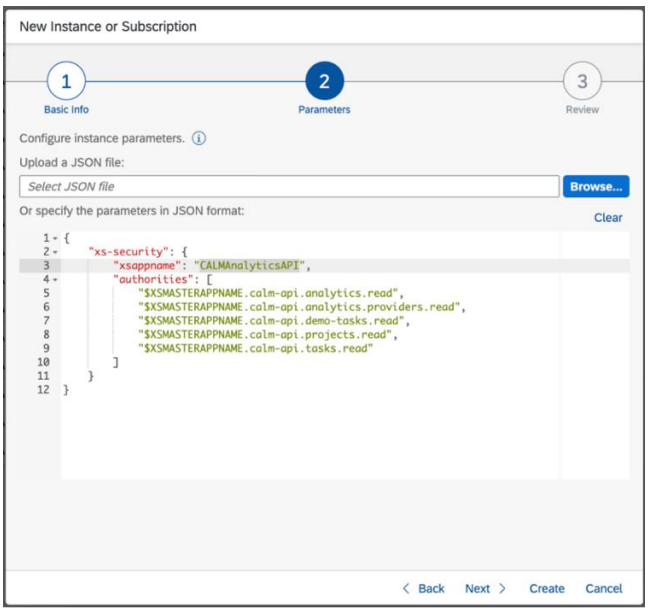


Figure 6: Cloud ALM API Instance

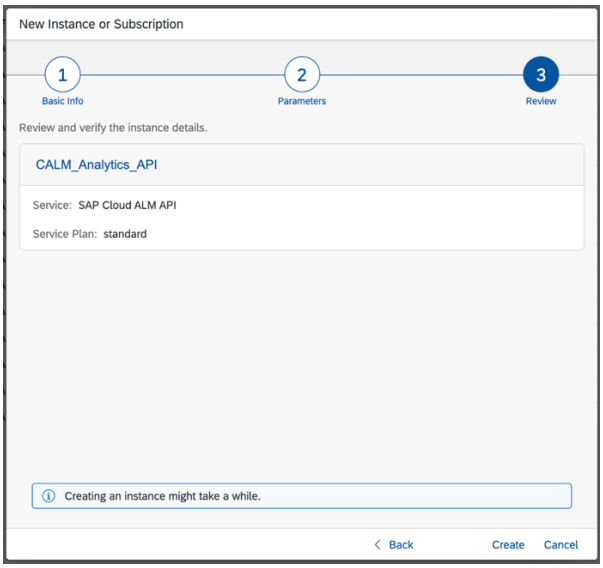
- In addition, following scopes are also needed to access “Configuration and Security Analysis” data:
  - calm-api.csa.read
  - calm-api.csa.personal.read

Remark: later scope provides access to personal data.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

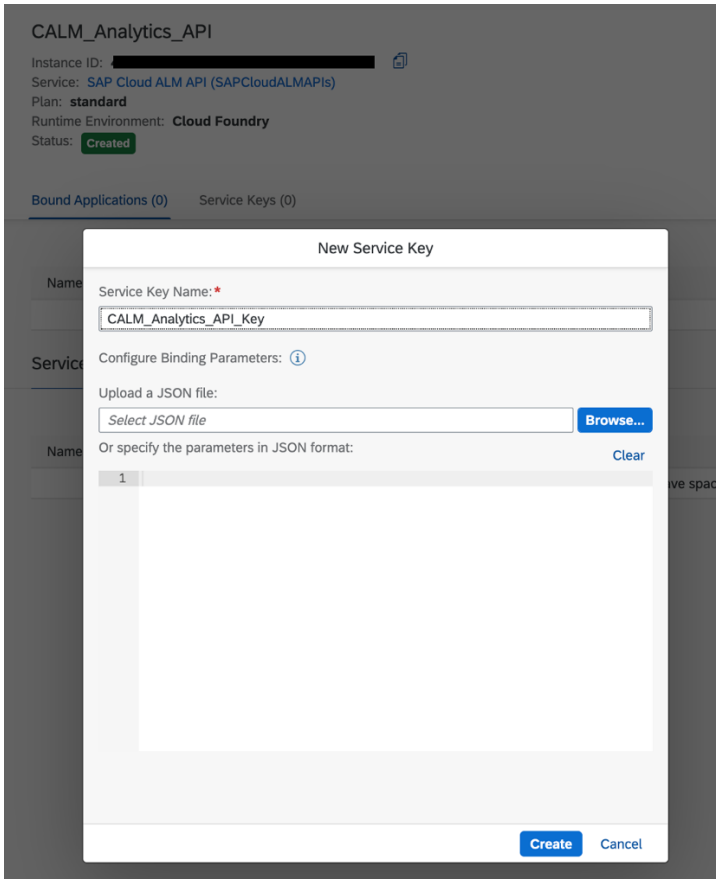


- Create the Service Instance

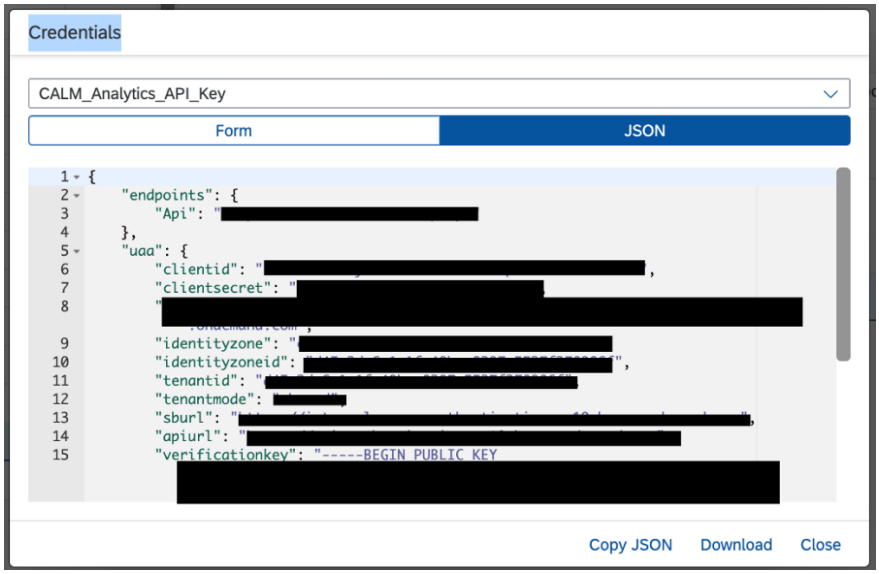


© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

- Create a key from the service instance by pressing the “Create” button.



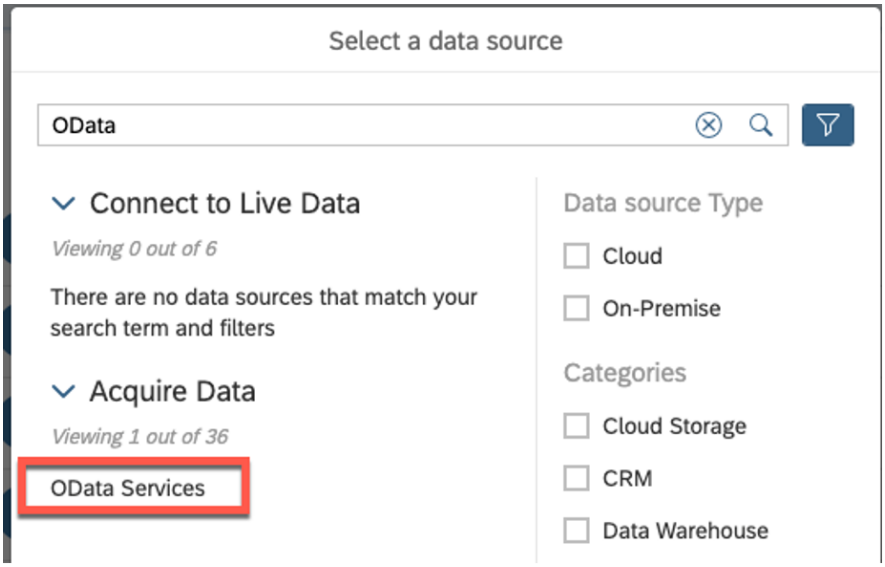
- Extract the client, secret and URL from the new created key.



© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

ii. Create SAC connection to Cloud ALM tenant.

- In SAP Analytics Cloud create an OData Services connection.

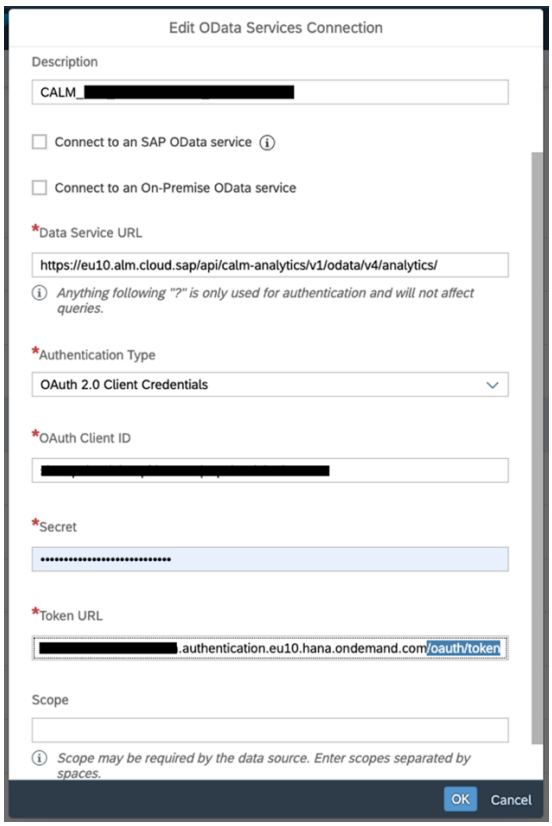


- Enter following parameters:

Configuration Item	Value	Comment
Data Service URL	https://eu10.alm.cloud.sap/api/calm-analytics/v1/odata/analytics/	Assumed that the tenant is in the European region EU10
Authentication Type	OAuth 2.0 Client Credential	
OAuth Client Id	<clientid>	retrieved from the service key (see above)
Secret	<clientsecret>	retrieved from the key (see above)
Token URL	<url> concatenated with path "/oauth/token"	url retrieved from the key (see above). Looks like: https://<subdomain>.authentication.<region>.hana.ondemand.com/oauth/token
Scope	Leave this blank	

Table 4: OData Connectivity Data in SAC

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

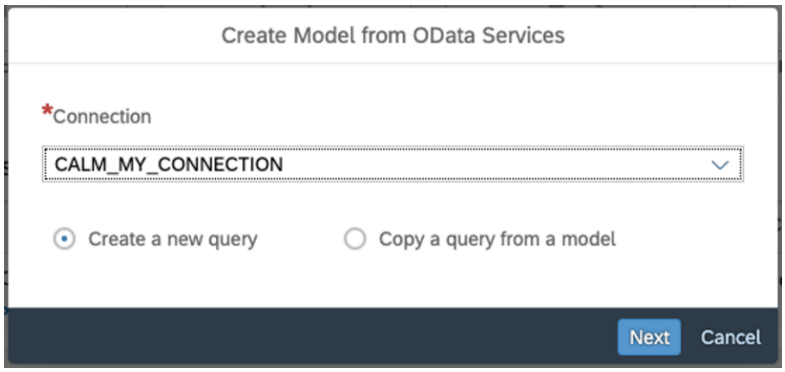


- Re-use this connection for all models accessing the data of this SAP Cloud ALM tenant.

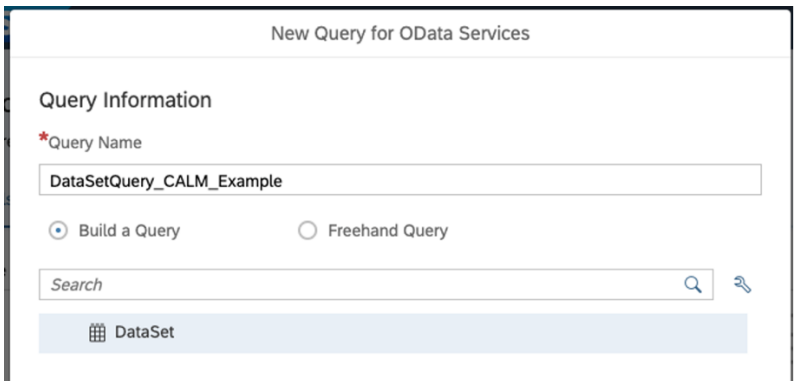
© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

iii. Create the SAC Model based on the Cloud ALM Connection

- Create a new Model based on the created data connection.



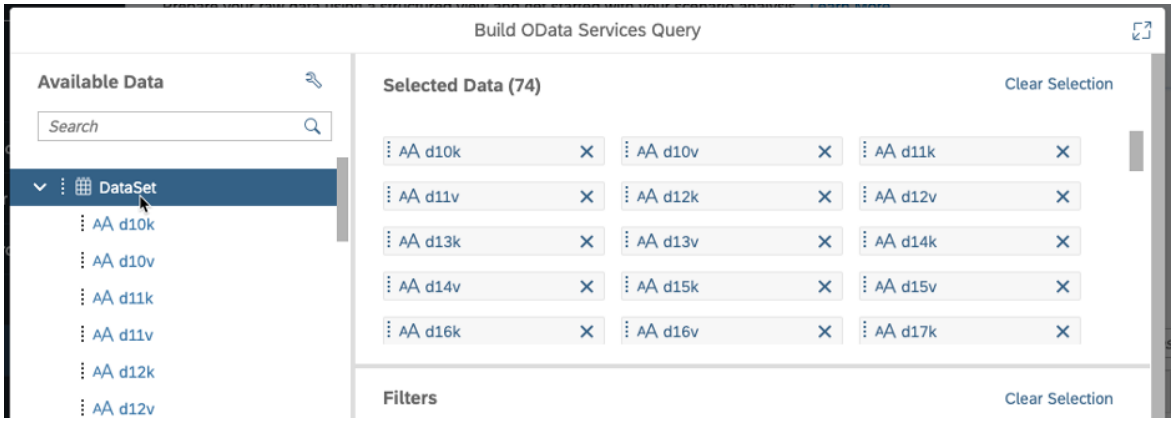
- Select the complete dataset.



- The OData interface offers:
    - a set of predefined dimensions (provider, version, period…),
    - 30 generic dimensions (d1k/d1V, d2k/d2v…d20k/d20v) and
    - 15 generic measures (m1k/m1v, m2k/m2v… m10k/m10v).
- Generic names ending with letter “k” contain the key of a dimension or measure, while generic names ending with letter “v” contain the value of a dimension or measure.
- Depending on the data provider, only a subset of generic dimensions and measures might be used.
- **Note:** the number of attributes for the SAP Analytics Cloud data model is restricted to 100 but the CALM connection delivers more than 100 attributes. Therefore, data must be removed. For example, the attributes from D20 to D30 not required since no data is provided from CALM for the SAC dashboard.

  Find more information on the interface and on the predefined dimensions here.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.



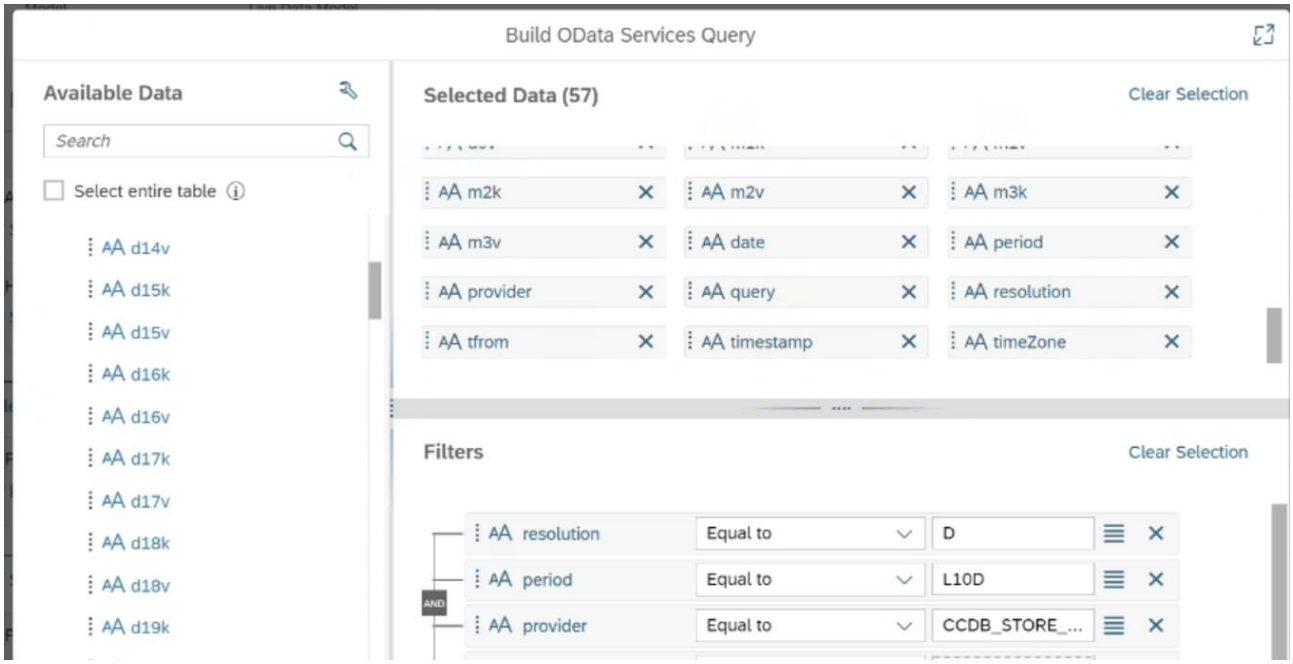
- Set the filter as follows:

Caution: when accessing OData interface, it's mandatory to select at least one data provider in the filters.

In order to filter generic dimensions (e.g. d14v) we need to use the dimension "Query".

Here, instead of "d14v"="X" we need to do the following:

"Query"="storeHasSecrec=X"



© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

Configuration Item	Value	Comment
provider	CCDB_STORE_DATA	The technical name of the data provider.
period	L10D	Selecting the data from the last 10 days. Note that you can also choose another period. It is recommended to use the last 2 days (L2D) which would work best for the current dashboard setup in SAC.
resolution	D	D stand for Days and is also relevant for the timeframes for the data extraction.
Query	”storeHasSecrec=X”	Note: to filter only the values which are relevant for cloud services the generic dimension D14 (storeHasSecrec) carries an “X” as a marker. In the filter settings of SAC this must configured. E.g. for single values like: Query=”storeHasSecrec=X” E.g. for multiple values like: Query=”storeHasSecrec=X+serviceId=f4f971bb-6109-400a-b776-297a641235f8”

Table 5: Filter Settings in SAC

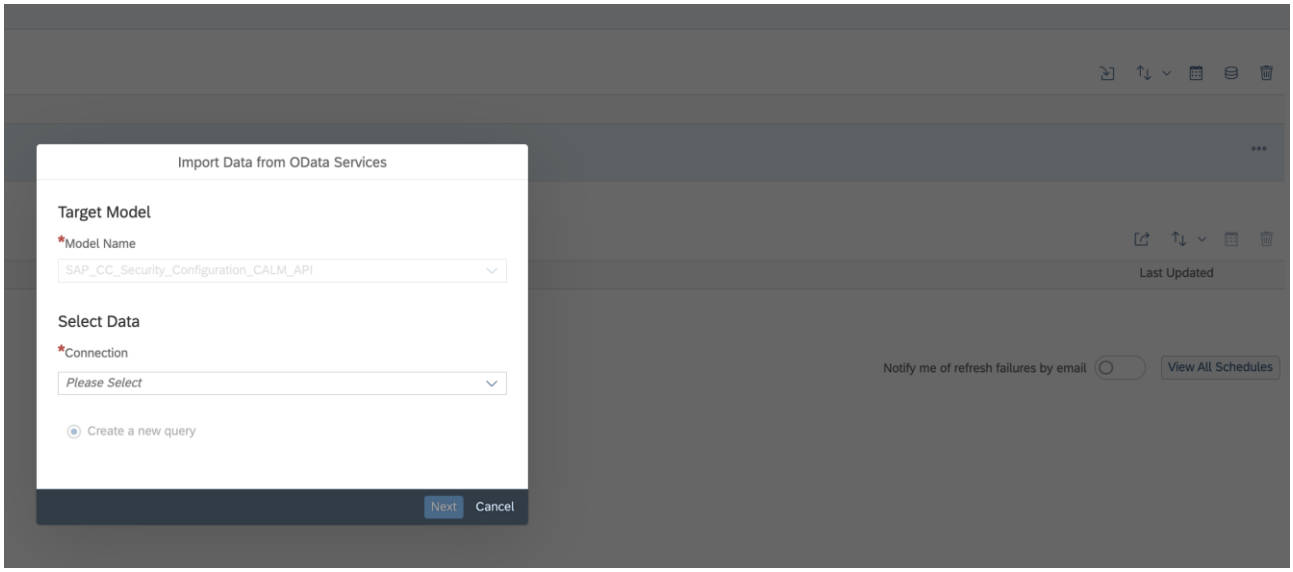
© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

c. Schedule Data Import

Security configuration data needs to be imported once a day to display the desired results on the SAC Cloud Security Dashboard.

i. Data Import Selection

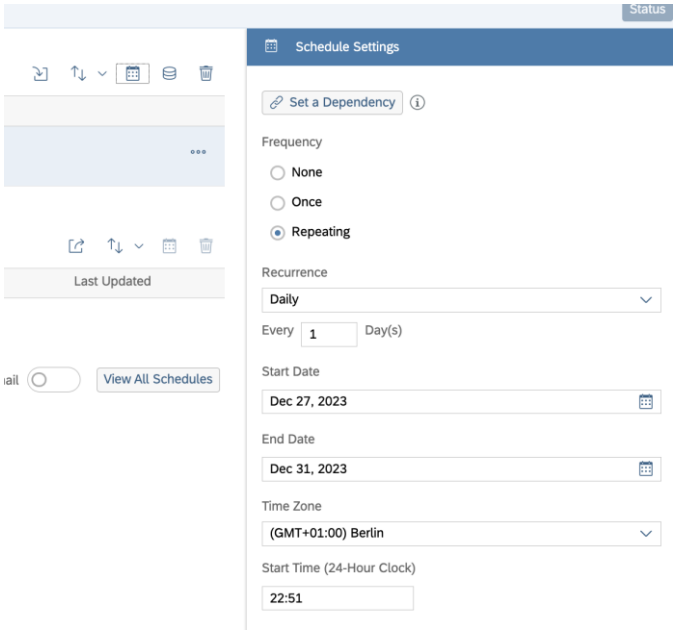
Therefore the standard data import mechanism from the previous created connection (SAP Analytics Cloud Connection to Cloud ALM) needs to be scheduled like described in the standard documentation.



© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

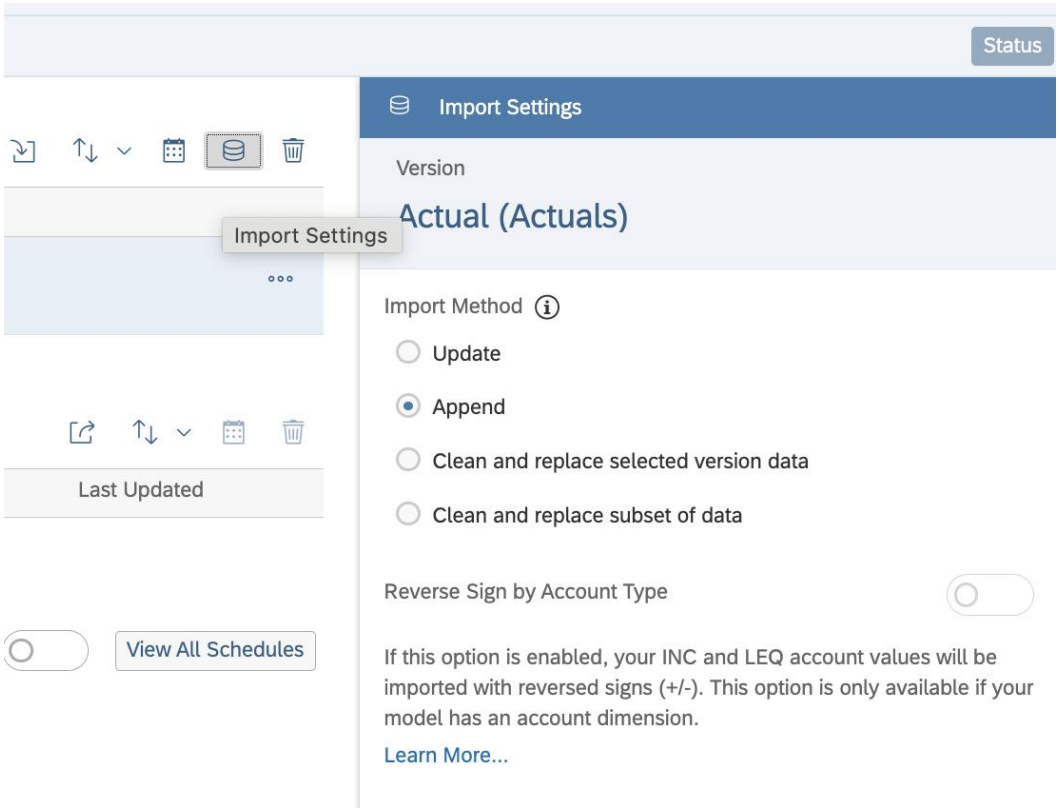
Scheduling Settings

- Choose the schedule icon in the data management view and set the schedule as a repeating import for once a day.



ii. Import Settings

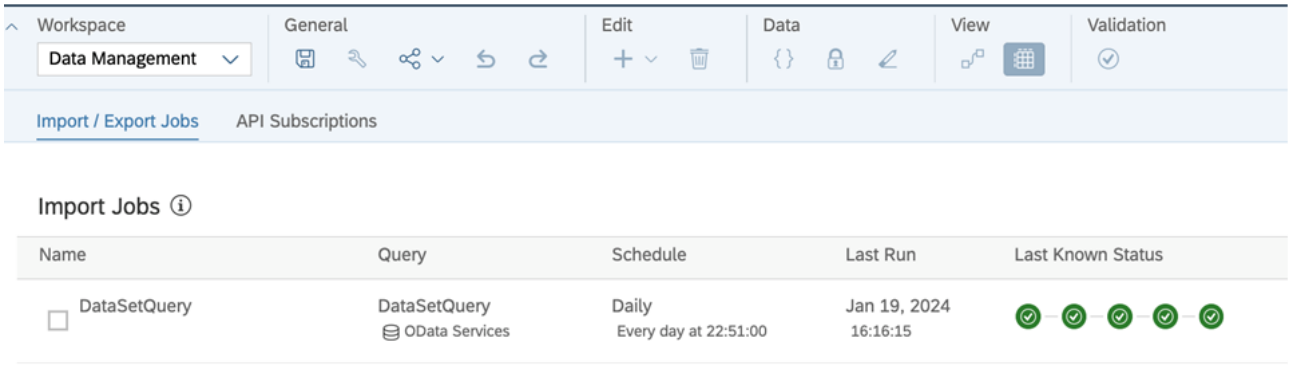
- Select in the import settings the import method “Append”. This allows to show later the Trend Analysis in the Security Dashboard.



© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

iii. Scheduled Data Import

- Once the data import is scheduled, the overview will show the daily scheduled OData Service import.



© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

8. Result

With the provided sample files, it is possible to visualize some of the SAC Dashboard Template features, as shown in Figure 7 below. The story is prepopulated with sample data to provide an overview of the security dashboard capabilities to customers.

With the provided sample data files, compliance officers or a cloud security administrators, responsible for operations and security & compliance can use SAP Analytics Cloud dashboard template as central source of truth for gathering information to get analytical insights into the security status of their SAP Cloud Solutions and to identify a risk score.

As displayed in the example given in Figure 7, one can see that 5 cloud systems are connected to the dashboard and overall, 30 security controls are in place. For these security controls, 16 items are reported to the dashboard as non-compliant. Out of these 53% non-compliant items, one can notice 40% that are critical, 37% with a high criticality and 23% with medium items to solve. It is also worth noticing that over the last 24 hours no new items have been received; a security compliance officer might be interested in what happened on the last day, when the last input came in.

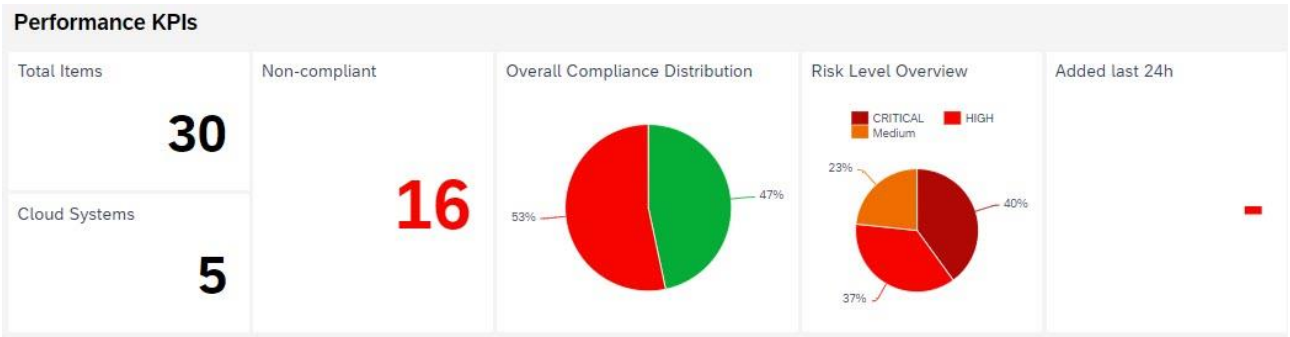


Figure 7: Example of SAC Compliance View

Figure 7 shows the following key figures:

- Total Items: Number of controls which are checked.
- Cloud Systems: Number of cloud systems which are connected and providing data
- Non-compliant: Total number of non-compliant items
- Overall Compliance Distribution: Percentage rate of compliant and non-compliant items
- Risk Level Overview: Percentage of Critical, High and Medium items of non-compliance
- Added last 24h: Items received during the last 24 hours

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

Dashboard Chart	Description
Compliance per Risk Level	Total number of risks including the compliance and non-compliance
Compliance per Cloud Application	Total number of compliance / non-compliance. Items per cloud solution
Compliance per Component	Total number of compliance / non-compliance Items per component of cloud solution
Compliance per Topic	Total number of compliance / non-compliance Items per topic as documented in the Cloud Security Recommendations
Compliance by Secure Operation Map	Total number of compliance / non-compliance Items per area of SAP´s secure operation map as documented in the Cloud Security Recommendations

Table 6: Description Compliance Status by Category

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

The visualization example in Figure 8 shows the different compliance status by different aggregation attributes. Overall, it displays the compliance status per categories like the risk level, or the cloud application that are affected and the components, the topics and the items spread over the SAP secure operations map.

The SAC dashboard template offers the possibility to click on any item and to drill-down to the related categories. For instance, one can spot the most critical non-compliant items and check which cloud application is the most affected.

Another view can provide more details on the component for instance Destination Service which contains the most non-compliant items to fix. The view on the topic would provide additional input, showing for instance, that the token lifecycle is impacted. Finally, the view of the compliance per SAP's secure operations map reflects which, in this case, Authentication & Sign-On is concerned.

Figure 8: Compliance View, Example 2

More visualization screens are also available, to facilitate the analysis of the security status of SAP Cloud Solutions.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

9. SAC Dashboard Operations

a. Static Extension File Update

- The current data model provides a static extension file which delivers all the data which is not part of the Cloud ALM Analytics API like described in Section 6.b).
- Based on the onboarding of new SAP Cloud Services over time an update of this file is needed. Use the corresponding Security Recommendation help pages (see Section 3) to update the static extension file.
- The static extension must be maintained in the SAC in the dimension table **SAP_CC_SecConfig_CALMAPI** of the SAC data model.

b. Clean-Up Sample Data

- The provided SAC template is equipped with Sample Data. Please make sure that the sample data is deleted via the Data Management view once real cloud application data is received via the OData API.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.

10. Terms and Conditions

The content samples offered on this data set and SAP Analytics Cloud template may be downloaded and installed without additional license fees. Content samples are provided to support an implementation project, to share best practices and to inspire your own content development. It is forbidden to sell these content samples or use them commercially in any way.

Content samples have been tested and reviewed by SAP. However, they come as they are: In case of errors or other problems, SAP is not liable to offer fixes nor any kind of support and maintenance. It is recommended that you test the content first, ideally in a test environment. You can also edit, enhance, copy, or otherwise use the content in your own projects. If you do this, potential later updates of the sample content may not be installable without additional effort or not at all.

Content samples do not necessarily follow a naming convention, so please analyze carefully if they can be imported into your destination tenant without overwriting. Overwriting existing content in your destination tenant is not recommended.

Content samples are not necessarily based on specific SAP products and data sources. Content or sample data may become outdated, and SAP has no obligations to keep the content up to date. SAP may at any time without offering alternative packages deprecate content projects.

© 2024 SAP SE or an SAP affiliate company. All rights reserved. See Legal Notice on www.sap.com/legal-notice for use terms, disclaimers, disclosures, or restrictions related to this material.